IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: ROCH *et al.*	)	Group Art Unit: 1649
Serial No.: 10/776,013	)	
Filed: February 9, 2004	)	
For: Compositions and Methods for Treating Neurological Disorders and Diseases	)	Examiner: Olga N. Chernyshev

July 21, 2006

DECLARATION UNDER 37 C.F.R. § 1.132

1. I, Paul Bartel, am presently employed by Myriad Genetics, Inc., (Myriad) as Vice President for Target Discovery and am responsible for the identification of Alzheimer's disease drug targets at Myriad. I have been employed by Myriad Genetics, Inc., at its headquarters in Salt Lake City, Utah, 84108, U.S.A., since September 18, 1995. Submitted herewith as Exhibit 1 is a *Curriculum Vitae* summarizing my scientific work experience.

2. Experiments conducted under my supervision have shown that overexpression of recombinant, catalytically active, wild type FAK2 results in a statistically significant increase in Aβ40 and Aβ42 being secreted from human cells in culture.

3. Further, experiments conducted under my supervision have shown that overexpression of a recombinant, catalytically-dead, dominant-negative K457A mutant form of FAK2 results in a statistically significant decrease in Aβ40 and Aβ42 being secreted from human cells in culture.

4. These results suggest that inhibition of FAK2 within human cells in vivo, or a lowering of its concentration within such cells, would result in a reduction of the amount of Aβ40 and Aβ42 secreted by such cells.

5. Decreasing the amount of Aβ40 and Aβ42 secreted by human cells is therapeutically desirable, in view of the role of secreted Aβ42 in the formation of amyloid plaques within the brains of Azheimer's disease patients.

6. Therefore, inhibition of FAK2 should have therapeutic utility.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the aforementioned patent application or any patent issued thereon.

Paul L. Bartel

Paul L. Bartel, Ph.D.

July 21, 2006

Date

EXHIBIT 1

Curriculum Vitae

Name: **Paul L. Bartel**

Work Address:
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Ph. (801) 584-3677
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Home Address:
1461 Kensington Avenue
Salt Lake City, UT 84105
Ph. (801) 466-7690

Education:

1985-1989 **Ohio State University**, Columbus, Ohio
Ph.D., Microbiology
Advisor: Dr. William R. Strohl
Thesis: *Biochemical and Genetic Analysis of Daunomycin and Hybrid Antibiotic Biosynthesis by Anthracycline-producing Streptomycetes*

1982-1985 **Ohio State University**, Columbus, Ohio
M.S., Chemical Engineering
Advisor: Dr. Duane R. Skidmore
Thesis: *Microbial Desulfurization of Coal Using Thermophilic Microorganisms: Effects of Elevated Partial Pressures of Oxygen and Carbon Dioxide*

1977-1982 **University of Cincinnati**, Cincinnati, Ohio
B.S., Chemical Engineering

Employment:

2002-Present **Vice President, Target Identification**
Myriad Pharmaceuticals, Inc., Salt Lake City, Utah
Directed cell-based validation efforts in the fields of oncology, Alzheimer's Disease, and HIV/AIDs. Responsible for identification and delivery of validated targets for drug development efforts. Supervised over 20 scientists. Participated in committees overseeing preclinical stages of drug development. Led efforts to identify preclinical in-licensing opportunities.

2000-2002 **Vice President of Proteomics**
1997-2000 **Director of ProNet Technologies**
Myriad Genetics, Inc., Salt Lake City, Utah
Established and operated Myriad's ProNet technology, an automated version of the yeast two-hybrid system. Conducted alliances with life sciences companies including Abbott, Bayer, Hitachi, Pharmacia, Roche, Schering, and Syngenta. Supervise group of over 40 researchers responsible for process operation, alliance management, technology development, validation studies, and laboratory automation. Participate in marketing of technology and establishment of alliances. Development projects include target validation, expansion of two-hybrid applications, and utilization of mass spectrometry for the analysis of multiprotein complexes.

1996-1997 **Senior Scientist**
1995-1996 **Staff Scientist**
Myriad Genetics, Inc., Salt Lake City, Utah
Directed functional studies of proteins discovered in positional cloning efforts. Identified and characterized proteins that interact with tumor suppressor proteins BRCA1, BRCA2, and MMAC1/PTEN.

1989-1995 **Postdoctoral Fellow**
State University of New York at Stony Brook, New York
Advisor: Dr. Stanley Fields
Developed initial yeast two-hybrid technology including vectors, reporter genes, strains, and protocols. Identified and characterized two proteins that interact with the p53 tumor suppressor protein. Generated the first comprehensive map of protein interactions for any organism, in this case, *E. coli* bacteriophage T7.

1982-1989 **Graduate Teaching Associate**
The Ohio State University, Columbus, Ohio

1978-1982 **Co-op Engineer**
B.F. Goodrich Chemical Co., Cleveland, Ohio
Involved in development and design projects for a variety of polymer production processes.

Publications:

Fraser, I., Pearman, T., Williams, B., Sinkovits, B., Dufford, M., Lin, K.-M., Hsueh, R., Yan, Z., Grosssoehme, J., Pierce, R., Polasek, J., Girouard, J., Heichman, K., **Bartel, P.** and G. Sambrano. April 3, 2003. Yeast Two-Hybrid Interactions in B Lymphocytes and Cardiac Myocytes. AfCS Research Reports, Brief Communication.

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Wong, A.K.C., R. Pero, P.A. Ormonde, S.V. Tavtigian, and **P.L. Bartel**. 1997. RAD51 interacts with the evolutionarily conserved BRC motifs in the human breast cancer susceptibility gene *brca2*. J. Biol. Chem. **272**:31941-31944.

Bartel, P.L. and S. Fields (eds.) The Yeast Two-Hybrid System. 1997. Oxford University Press. New York, New York.

Teng, D.H-F., W.L. Perry III, J.K. Hogan, M. Baumgard, R. Bell, S. Berry, T. Davis, D. Frank, C. Frye, T. Hattier, R. Hu, S. Jammulapati, T. Janecki, A. Leavitt, J.T. Mitchell, R. Pero, D. Sexton, M. Schroeder, P-H. Su, B. Swedlund, J.M. Kyriakis, J. Avruch, **P. Bartel**, A.K.C. Wong, A. Oliphant, A. Thomas, M.H. Skolnick, S.V. Tavtigian. 1997. Human mitogen-activated protein kinase 4 as a candidate tumor suppressor. Cancer Res. **57**:4177-4182.

Bartel, P.L., J.A. Roecklein, D. SenGupta, and S. Fields. 1996. A protein linkage map of *Escherichia coli* bacteriophage T7. Nature Gen. **12**:72-77.

Hannon, G. and **P. Bartel**. 1996. Identification of interacting proteins using the two-hybrid system. *In* J. Murray (ed.) Methods in Molecular and Cellular Biology.

Bartel, P.L. and S. Fields. 1994. Analyzing protein-protein interactions using the two-hybrid system. *In* P.K. Vogt and I.M. Verma (eds.), Methods in Enzymology, vol. 254, Oncogene Techniques. Academic Press, Inc. San Diego, California.

Iwabuchi, K., **P. Bartel**, B. Li, R. Marraccino, and S. Fields. 1994. Two cellular proteins that bind to wild-type but not mutant p53. Proc. Natl. Acad. Sci. USA. 91:6098-6102.

Bartel, P.L., C-T. Chien, R. Sternglanz, and S. Fields. 1993. Elimination of false positives that arise in using the two-hybrid system. BioTechniques. **14**:920-924.

Bartel, P.L., C-T. Chien, R. Sternglanz, and S. Fields. 1993. Using the Two-Hybrid system to Detect Protein-Protein Interactions. *In* D.A. Hartley (ed.), Cellular Interactions in Development: A practical approach. IRL Press, New York.

Iwabuchi, K., B. Li, **P. Bartel**, and S. Fields. 1993. Use of the two-hybrid system to identify the domain of p53 involved in oligomerization. Oncogene. **8**:1693-1696.

Chien, C-T., **P.L. Bartel**, R. Sternglanz, and S. Fields. 1991. The two-hybrid system: A method to identify and clone genes for proteins that interact with a protein of interest. Proc. Natl. Acad. Sci. USA. **88**:9578-8582.

Strohl, W.R., **P.L. Bartel**, Y. Li, N.C. Connors, and R.H. Woodman. 1991. Expression of polyketide biosynthesis and regulatory genes in heterologous streptomycetes. J. Ind. Microbiol. **7**:163-174.

Bartel, P.L., C-B. Zhu, J.L. Lampel, D.C. Dosch, N.C. Connors, W.R. Strohl, J.M. Beale, Jr., and H.G. Floss. 1990. Biosynthesis of anthraquinones by interspecies cloning of actinorhodin biosynthesis genes in streptomycetes: Clarification of actinorhodin gene functions. J. Bacteriol. **172**:4816-4826.

Bartel, P.L., N.C. Connors, and W.R. Strohl. 1990. Biosynthesis of anthracyclines: Analysis of mutants of *Streptomyces* sp. C5 blocked in daunomycin biosynthesis. J. Gen. Microbiol. **136**:1877-1886.

Connors, N.C., **P.L. Bartel**, and W.R. Strohl. 1990. Biosynthesis of anthracyclines: Enzymic conversion of aklanonic acid to aklavinone and ε-rhodomycinone by anthracycline-producing streptomycetes. J. Gen. Microbiol. **136**:1887-1894.

Connors, N.C., **P.L. Bartel**, and W.R. Strohl. 1990. Biosynthesis of anthracyclines: Carminomycin 4-O-methyltransferase, the terminal enzymic step in the formation of daunomycin. J. Gen. Microbiol. **136**:1895-1898.

Strohl, W.R., **P.L. Bartel**, N.C. Connors, C-B. Zhu, D.C. Dosch, J.M. Beale, Jr., H.G. Floss, K. Stutzmann-Engwall, S.L. Otten, and C.R. Hutchinson. 1989. Biosynthesis of natural and hybrid polyketides by anthracycline-producing streptomycetes, pp. 68-84. In C.L. Herschberger, S.W. Queener, and G. Hegeman (eds.), Genetics and Molecular Biology of Industrial Microorganisms. American Society for Microbiology, Washington, D.C.

Patents:

Bartel, P.L. 2004. Membrane-associated protein 17KD (MAP17)-interacting protein and use thereof. Patent No. US 6,831,154.

Roch; J.-M., **P.L. Bartel**, K. Heichman, K. Mauck, and M. Dufford. 2003. Nucleic acid encoding a phosphatase 2C that interacts with Fe 65. Patent No. US 6,653,102.

Bartel, P.L. and S.V. Tavtigian. 2002. MMSC1-an MMAC1 interacting protein. Patent No. US 6,337,192.

Bartel, P.L. and S.V. Tavtigian. 2001. MMSC2-an MMAC1 interacting protein. Patent No. US 6,291,173.

Wong, A.K.C., **P.L. Bartel**, D.H.-F. Teng, and S.V. Tavtigian. 2001. Carboxy-terminal BRCA1 interacting protein. Patent No. US 6,235,263 B1.

Wong, A.K.C., **P.L. Bartel**, D.H.-F. Teng, and S.V. Tavtigian. 2000. Carboxy-terminal BRCA1 interacting protein. Patent No. US 6,030,832.